Measuring the Effect of Motorcycle Rider Training on Psychosocial Influences for Risk Taking

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Overview

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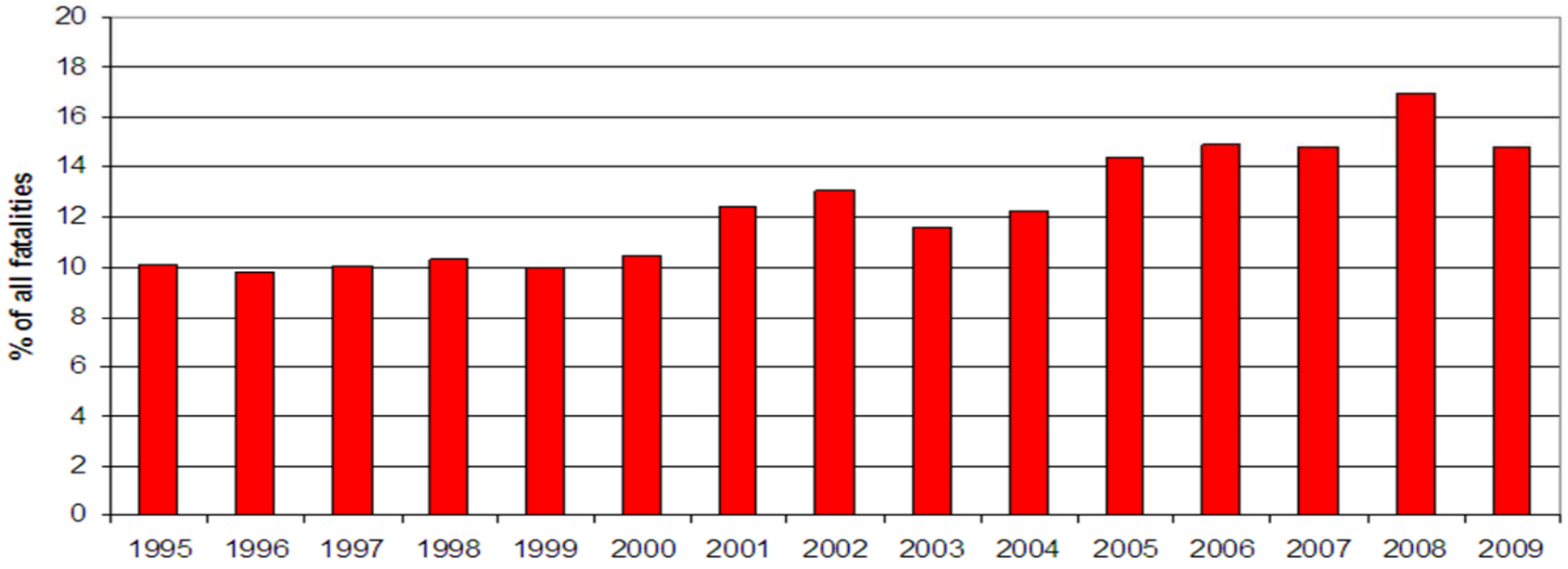
Research Rationale

Motorcyclists as a Proportion of all Road Fatalities in Australia 1995-2009



Research Rationale (2)

- Formal rider training programs generally have not been found to reduce crash risk beyond informal training
- Where are the potential deficiencies?
  - Training content (e.g. addressing risk taking)
  - Training delivery
  - The influence of the licensing system
  - Evaluation methodology
  - Overconfidence, perceived increased skills not aligned with actual skills
- Most rider training is skills based (Haworth et al. 2000)

Project Background

- Watson et al. (2007) investigated influences on risky riding and developed the Rider Risk Assessment Measure (RRAM) based on the Theory of Planned Behaviour (Ajzen, 1985, 1991)

Risky Riding Behaviours
Pushing limits
Bending road rules
Impairment
Extreme speeds & stunts

Predictors
Peer influence
Attitude to risky riding
Intentions
Rider aggression
Sensation seeking
*PBC not found to be a strong predictor

Background (2)

- Attitudinal and motivational influences on risky riding are rarely actually measured in the context of rider training
- This study was undertaken within a commercial rider training organisation
  - formed part of a longitudinal study
  - the importance of establishing a baseline
- Research question: Does the existing training conducted by our industry partner have any effect on psychosocial influences for risky riding?

Method

Participants - 438 motorcycle licence applicants attending a voluntary pre-licence rider training course in Brisbane, Australia.*

- voluntary participation
- consented for long-term follow up

Materials – modified RRAM measuring:

- demographics
- traffic history
- modified TPB constructs

Procedure – independent nature of the research was initially outlined.

- modified RRAM administered
  - start of training (Time 1)
  - end of training (Time 2)

**Licensing requirements vary between states*

Method (2)

Design and analysis - repeated measures design over time. No manipulation beyond normal training, purely exploratory.

Summary scales for key constructs of interest were constructed.

Attitudes	Subjective norm (family & friends)	Specific subjective norm (riding peers)
Intentions to engage in risky riding (next 12 months)	Thrill seeking propensity (motorcycle specific)	Aggression (motorcycle specific)

Results

Sample characteristics

- Mean age 34.5yrs, range 16-65yrs
- 78.7% male
- 16% one crash last 3 years, 7% 2 crashes or more
- 70.1% indicated they had ridden a motorcycle before **however**:
  - 46% of these had **never** ridden on road before
  - 27% had < 1 year experience on-road riding
  - 54% had < 2 years experience off-road riding

Results (2)

All items scored on a 7-point Likert scale

End of Training Course Rating Variable (n = 278)	*M*	*SD*
The classroom sessions were too long	2.45	1.43
The trainers presented things in a way that made sense to me	6.21	1.20
The trainers repeated things until I knew what I was doing	6.17	1.19
The video examples used in training were helpful	5.51	1.47
The trainers were patient and considerate	6.40	1.11
There was too much information at once to remember	2.08	1.36

Results (3)

- Mean item scores shown for summary scales.
- Repeated measures t-tests revealed:

All items were scored on a 7-point Likert scale

Scales	***M* (Time 1)**	***M* (Time 2)**	***p***
Safety attitudes	5.83	5.94	<.001
Subjective norm	6.38	6.40	n/s
Specific Sub norm	6.14	6.09	n/s
Risky riding intentions	2.08	1.84	<.001
Thrill seeking	2.81	2.61	<.001

Results (4)

All items scored on a 5-point scale

	n	*M* Time 1	*M* Time 2	*p*
Males				
Perceived skill	221	2.89	3.17	<.001
Perceived safe riding	218	3.55	3.67	<.05
Females				
Perceived skill	23	2.22	3.22	<.001
Perceived safe riding	22	3.18	3.73	<.01

NB: Repeated measures is a particularly powerful form of analysis

Implications

The existing training program appears to be having a positive immediate effect on factors that underpin risk taking

1. Messages regarding risk taking are getting through (albeit with an unstructured delivery format). Somewhat of a reality check for novice riders.
2. Challenge for our planned intervention to find sig diffs beyond those already found here
3. Particular scope to further address peer influence (specific sub norm)
4. Participant ratings indicate scope for more information to be presented in training
5. Overconfidence may need to be addressed
6. Intermediate measures are of value in evaluations to guide areas of potential improvement, however will this effect last over time?

Strengths & Limitations

- *Strengths*
  - In the overall planned program of research, participants will be followed up over time for S/R data and official crash and offence data
  - In-depth examination of training identifies where the deficits are at org level
- *Limitations*
  - Difficult to control social desirability in licensing context
  - Possible that questionnaire raised awareness of risk issues, not training
  - Data presented here is merely a snapshot in time and must be interpreted as such. Need for follow-up to see if effects persist over time
  - Results may not generalise to all training organisations

Further Research

- An intervention based on the concepts identified by Watson et al. (2007) has been piloted with the industry partner.
  - Full intervention to be implemented soon with further S/R data collection & participant records to be obtained from Dept Transport
  - Comparisons between intervention group & this control group
- More broad-scale research required of this nature
- Find ways to extend training beyond small doses

Summary

- Rider training is valued by participants
- Skills do not equal behaviour, therefore important to measure factors that influence behaviour
- It is apparent that training can have an immediate positive effect on psychosocial influences for risk taking
- Challenge for training results to extend beyond licensing

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Questions?

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Mark your Diaries!

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